

CLAIM AMENDMENTS

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1. (Currently Amended) An apparatus for thermally affecting tissue, comprising:  
an implantable member having an outer surface configurable to contact the target tissue;  
and  
at least one fluid-tight lumen defined by the implantable member, the fluid-tight lumen  
being in thermal communication with the outer surface of the implantable member and being  
configured to receive a thermally transmissive fluid to thereby impart a thermal change to the  
outer surface of the implantable member; and  
a first temperature sensing element that is effective to measure the temperature of the  
target tissue.

2. (Original) The apparatus of claim 1, wherein the thermally transmissive fluid is selected  
from the group consisting of liquid, gas and a combination thereof.
3. (Original) The apparatus of claim 1, wherein the implantable member has a shape selected  
from the group consisting of substantially circular, substantially elliptical, substantially oval,  
substantially square, substantially trapezoidal and substantially rhomboid.
4. (Original) The apparatus of claim 3, wherein at least a portion of the implantable member is  
looped around itself to approximately resemble a coil shape.
5. (Original) The apparatus of claim 1, wherein the implantable member is formed from a  
flexible, heat conductive, biocompatible material.
6. (Original) The apparatus of claim 5, wherein the implantable member is formed from a  
silicone elastomer.
7. (Original) The apparatus of claim 1, wherein the implantable member is adapted for  
thermally transmissive contact with epidural brain tissue.

8. (Original) The apparatus of claim 1, wherein the implantable member is adapted for direct thermally transmissive contact with subdural brain tissue.

9. (Original) The apparatus of claim 1, further comprising:  
a backing member attached to the implantable member such that the backing member is in thermal contact with the tissue.

10. (Original) The apparatus of claim 9, wherein the backing member is made of a thermally transmissive material, the thermally transmissive material being resistant to adherence to the tissue.

11. (Original) The apparatus of claim 10, wherein the backing member is made of silicone.

12. (Currently Amended) The apparatus of claim 1, further comprising:

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a second temperature measurement element having a first end positioned in proximity to the implantable member and a second end in communication with a temperature indication element positioned within the lumen and effective to measure the temperature of any fluid within the lumen.

13. (Canceled) The apparatus of claim 12, wherein the first end of the second temperature measurement element is positioned within the at least one fluid tight lumen, and wherein the temperature indication element indicates the temperature of the thermally transmissive fluid.

14. (Canceled) The apparatus of claim 12, wherein the first end of the temperature measurement element is positioned between the implantable member and the tissue, and the temperature indication element indicates the temperature of the tissue.

15. (Currently Amended) The apparatus of claim 1, further comprising:  
a pressure measurement element having a first end positioned in proximity to the implantable member and a second end in communication with a pressure indication element effective to measure the pressure at which the implantable member is applied to the target tissue.

16. (Canceled) ~~The apparatus of claim 15, wherein the first end of the pressure measurement element is positioned between the implantable member and the tissue.~~

17. (Original) The apparatus of claim 15, wherein the pressure indication element is in communication with a warning indicator such that the warning indicator is effective to produce a signal upon the measurement of a predetermined pressure level by the pressure measurement element.

18. (Original) The apparatus of claim 17, wherein the signal is selected from the group consisting of a visual signal, an audio signal, and a combination thereof.

19. (Original) The apparatus of claim 1, wherein the implantable member is constructed of a shape memory material.

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46. (New) The apparatus of claim 1, wherein the first temperature sensing element is positioned on a tissue-contacting portion of the implantable member.

47. (New) The apparatus of claim 9, wherein the first temperature sensing element is positioned on the backing member.

B3. 48. (New) An apparatus for thermally affecting tissue, comprising:  
an implantable member having an outer surface configurable to contact target tissue, the implantable member being formed of a shape memory material that can be deformed to a first shape upon the application of a force and which returns to an at-rest shape upon removal of the force; and

at least one fluid-tight lumen defined by the implantable member, the fluid-tight lumen being in thermal communication with the outer surface of the implantable member and being configured to receive a thermally transmissive fluid to thereby impart a thermal change to the outer surface of the implantable member.

49. (New) An apparatus for thermally affecting tissue, comprising:  
an implantable member having an outer surface configurable to contact target tissue;

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cont.  
at least one fluid-tight lumen defined by the implantable member, the fluid-tight lumen being in thermal communication with the outer surface of the implantable member and being configured to receive a thermally transmissive fluid to thereby impart a temperature-reducing thermal change to the outer surface of the implantable member; and  
a temperature sensing element disposed within the lumen that is effective to measure the temperature of any fluid within the lumen.

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